

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-6, 27, 28, and 30 are pending in the application, with claim 1 being the independent claim. Claims 7, 30-33 and 35 are sought to be cancelled without prejudice to or disclaimer of the subject matter therein. Claims 1-6 have been amended to recite subject matter elected in Applicants' Response to Restriction, dated March 1, 2010. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Description of the Invention

The present invention relates to novel 2,4,6-phenyl substituted cyclic ketoenols, to a plurality of processes for their preparation and to their use as pesticides and/or herbicides.

Double Patenting Rejections

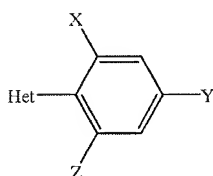
A. U.S. Patent No. 6,358,887

The rejection of claims 1-6 and 27-28 as allegedly being unpatentable on the ground of obviousness-type double patenting over claims 1-3 and 6-8 of U.S. Patent No. 6,358,887 ("the '887 patent") is respectfully traversed.

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The Office has stated that although the conflicting claims are not identical, they are not patentably distinct from each other because there is significant overlap between the instant claims and claims 1-3 and 6-8 of the '887 patent. Office Action, p. 5. Applicants respectfully disagree.

The claims of the '887 patent recite compounds of formula



wherein X, Y, Z and Het represent a large variety of radicals.

The '887 patent claims recite a very large genus of compounds. Even the narrowest sub-genus recited by dependent claim 3 is significantly broader than the instant claims. Therefore, the claims of the '887 patent do not point to a "typical," "preferred," or "optimum" species or subgenus that would point one of skill in the art to the claimed subject matter. In fact, claim 4 of the '887 patent is directed to a specific compound that the claims of the captioned application do not read on and therefore points away from the compounds of the present invention. Further, the claims of the '887 patent do not provide adequate guidance to a person of ordinary skill in the art to select the appropriate substituents in order to arrive at the claimed compounds of the present invention. Therefore, the claims of the '887 patent do not render obvious the claims of the instant invention.

In addition, Applicants respectfully disagree with the Office's reasoning that the claims of the '887 patent render obvious the instant claims because the overlap between

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the two structures in the two claims is significant when formula (I) in '887 is defined as X=halogen, Z=alkoxy and Y=alkyl. Applicants submit that the Office is employing impermissible hindsight in choosing the appropriate radicals from among the numerous choices in the compounds claimed in the '887 patent in order to arrive at the compounds of the present invention. The claims of the '887 patent recite a *broad genus of compounds that encompass thousands of compounds* and there is no guidance in the claims of the '887 patent to choose these particular radicals. In contrast, the claims of the present application are directed to a much smaller sub-genus. Even the narrowest claims of the '887 patent contain a large number of radicals that must be appropriately selected in order to arrive at the claimed compounds of the present invention. Accordingly, claims 1-6, and 27-28 are not *prima facie* obvious in light of the '887 patent and the rejection should be withdrawn.

Even assuming that a *prima facie* case of obviousness has been established, which it has not, the unexpected herbicidal action exhibited by the claimed compounds is sufficient to overcome any *prima facie* case of obviousness. Applicants submit herewith a Declaration under 37 C.F.R. § 1.132 ("Declaration") which recites the unexpected superiority of the claimed invention over compounds falling within the claims of the '887 patent. In the Declaration, chemist Dr. Wolfgang Thielert, recites data comparing the insecticidal action of the compounds of the present invention to compounds falling within the claims of the '887 Patent. The specific compounds listed in the Declaration were filed during the patent examination procedure of EP 0809629, which is the European equivalent of the '887 patent. A copy of the list of compounds submitted to the EPO during prosecution of EP 0909629 is attached.

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The results within the Declaration demonstrate that compounds of the present invention are far superior to compounds falling within the larger genus of compounds recited generally in the '887 patent claims, even at lower levels of application. For example, compound I-1-a-3 of the present invention exhibits a 65% aphid killing efficacy six days after application compared to 30% efficacy for a compound I-1-a-26, which the claims of the '887 patent read on, despite the fact that compound I-1-a-26 was used at twice the level of application of compound I-1-a-3. Declaration, p. 2. Compound I-1-b-1 of the present invention exhibits a 50% aphid killing efficacy six days after application compared to 0% efficacy for compound I-1-b-6, which the claims of the '887 patent read on, despite the fact that compound I-1-b-6 was used at a much higher level of application than compound I-1-b-1 (4 ppm versus 10 ppm, respectively). Similar results are seen for compounds I-1-c-1 and I-1-c-7 of the Captioned invention. *Id.* p 3-4. Accordingly, assuming *arguendo* that a *prima facie* case of obviousness had been established, it would be properly rebutted by the unexpectedly superior results of the compounds of the present invention.

Withdrawal of the rejection is respectfully requested.

Applicants wish to note that the example number is missing from the first row of the table on page 3 of the Declaration. The missing example number is "Ex. I-1-b-23."

B. U.S. Patent No. 7,432,225

The rejection of claims 31-33 and 35 as allegedly being unpatentable on the ground of obviousness-type double patenting over claims 1-4 of U.S. Patent No. 7,432,225 ("the '225 patent") is respectfully traversed. While not acquiescing to the

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rejection and solely to expedite prosecution, Applicants have cancelled claims 31-33 and 35 and respectfully request that the rejection be withdrawn.

Rejections under 35 U.S.C. § 112, second paragraph

The rejection of claims 1-6, 27-28, 30-33 and 35 under 35 U.S.C. § 112, second paragraph, for allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention is respectfully traversed. The Office has stated that the phrase “A and D together with the atoms to which they are attached ... or unsaturated cycle which optionally (only in the case of CKE = 1) contains at least one heteroatom” is not clear. Applicants have cancelled claims 30-33 and 35 rendering the rejection of claims 30-33 and 35 moot. While not acquiescing to the rejection and solely to expedite prosecution, Applicants have cancelled the phrase “(only in the case of CKE = 1).” Accordingly, Applicants respectfully request that the rejection of claims 1-6 and 27-28 be withdrawn

Objections to the Claims

The Office has objected to claim 31 for recitation of the “general formula” which is allegedly not specific and suggested that applicants delete “general” to overcome this rejection. Applicants have deleted claim 31, rendering the objection moot and request that the objection be withdrawn.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be

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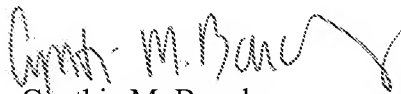
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withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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3. Anlage zur Eingabe vom 24. Januar 2000

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Formula (1-1-a)

Ex.-No.	X	Y	Z	A	B	D	Fp. °C	Isomer
I-1-a-9	CN	CH ₃	CH ₃	-(CH ₂) ₂ -CHOCCH ₃ -(CH ₂) ₂ -		H	>220	β
I-1-a-10	CN	CH ₃	CH ₃	-(CH ₂) ₅ -		H	>220	-
I-1-a-11	CH ₃	CN	CH ₃	-(CH ₂) ₂ -CHOC ₂ H ₅ -(CH ₂) ₂ -		H	>220	β
I-1-a-12	CH ₃	CN	CH ₃	-(CH ₂) ₂ -CHOCCH ₃ -(CH ₂) ₂ -		H	>220	β
I-1-a-13	CH ₃	OCF ₃	H	-(CH ₂) ₂ -CHCH ₃ -(CH ₂) ₂ -		H	>220	β
I-1-a-14	CH ₃	OCF ₃	H	-(CH ₂) ₂ -CHOCCH ₃ -(CH ₂) ₂ -		H	>220	β
I-1-a-15	OCHF ₂	CH ₃	CH ₃	-(CH ₂) ₂ -CHCH ₃ -(CH ₂) ₂ -		H	219	β
I-1-a-16	OCHF ₂	CH ₃	CH ₃	CH ₃ CH ₃		H	156	-
I-1-a-17	C ₆ H ₅	CH ₃	CH ₃	-(CH ₂) ₂ -CHCH ₃ -(CH ₂) ₂ -		H	211	β
I-1-a-18	C ₆ H ₅	CH ₃	CH ₃	-(CH ₂) ₂ -O-(CH ₂) ₂ -		H	>220	-
I-1-a-19	C ₆ H ₅ - CH ₂ -O	CH ₃	CH ₃	-(CH ₂) ₂ -CHCH ₃ -(CH ₂) ₂ -		H	205	β
I-1-a-20	CN	CH ₃	CH ₃	-(CH ₂) ₂ -CHOC ₂ H ₅ -(CH ₂) ₂ -		H	>220	β
I-1-a-21	CH ₃	CN	CH ₃	-(CH ₂) ₅ -		H	>220	-

Formula (1-1-b)

Ex.-No.	X	Y	Z	A	B	D	R ¹	Fp. °C	Isomer
I-1-b-5	CN	CH ₃	CH ₃	CH ₃	CH ₃	H	i-C ₃ H ₇	151	-
I-1-b-6	CN	CH ₃	CH ₃	-(CH ₂) ₂ -CHOCH ₃ -(CH ₂) ₂ -		H	i-C ₃ H ₇	208	β
I-1-b-7	CN	CH ₃	CH ₃	-(CH ₂) ₂ -CHOCH ₃ -(CH ₂) ₂ -		H	t-C ₄ H ₉ -CH ₂	199	β
I-1-b-8	CN	CH ₃	CH ₃	-(CH ₂) ₅ -		H	i-C ₃ H ₇	>220	-
I-1-b-9	CN	CH ₃	CH ₃	-(CH ₂) ₅ -		H	t-C ₄ H ₉ -CH ₂	226	-
I-1-b-10	CH ₃	CN	CH ₃	-(CH ₂) ₂ -CHCH ₃ -(CH ₂) ₂ -		H	i-C ₃ H ₇	198	β
I-1-b-11	CH ₃	CN	CH ₃	-(CH ₂) ₂ -CHOC ₂ H ₅ -(CH ₂) ₂ -		H	i-C ₃ H ₇	185	β
I-1-b-12	CH ₃	CN	CH ₃	-(CH ₂) ₂ -CHOCH ₃ -(CH ₂) ₂ -		H	i-C ₃ H ₇	205	β
I-1-b-13	CH ₃	CN	CH ₃	-(CH ₂) ₂ -CHOCH ₃ -(CH ₂) ₂ -		H	t-C ₄ H ₉ -CH ₂	>220	β
I-1-b-14	CH ₃	OCF ₃	H	-(CH ₂) ₂ -CHCH ₃ -(CH ₂) ₂ -		H	i-C ₃ H ₇	198	β
I-1-b-15	CH ₃	OCF ₃	H	-(CH ₂) ₂ -CHCH ₃ -(CH ₂) ₂ -		H	t-C ₄ H ₉ -CH ₂	194	β
I-1-b-16	CH ₃	OCF ₃	H	-(CH ₂) ₂ -CHOCH ₃ -(CH ₂) ₂ -		H	i-C ₃ H ₇	194	β
I-1-b-17	CH ₃	OCF ₃	H	-(CH ₂) ₂ -CHOCH ₃ -(CH ₂) ₂ -		H	t-C ₄ H ₉ -CH ₂	193	β
I-1-b-18	OCHF ₂	CH ₃	CH ₃	CH ₃	CH ₃	H	i-C ₃ H ₇	196	β
I-1-b-19	C ₆ H ₅	CH ₃	CH ₃	-(CH ₂) ₂ -CHCH ₃ -(CH ₂) ₂ -		H	i-C ₃ H ₇	218	β

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Formula (I-1-c)

Ex-No.	X	Y	Z	A	B	D	L	M	R ²	Fp. °C	Isomer
I-1-c-4	CN	CH ₃	CH ₃	CH ₃	CH ₃	H	O	O	C ₂ H ₅	115	-
I-1-c-5	CN	CH ₃	CH ₃	(CH ₂) ₂ -CHOCH ₃ -(CH ₂) ₂ -		H	O	O	C ₂ H ₅	195	β
I-1-c-6	CN	CH ₃	CH ₃	-(CH ₂) ₅ -		H	O	O	C ₂ H ₅	>220	-
I-1-c-7	CH ₃	CN	CH ₃	CH ₃	CH ₃	H	O	O	C ₂ H ₅	140	-
I-1-c-8	CH ₃	CN	CH ₃	-(CH ₂) ₂ -CHOCH ₃ -(CH ₂) ₂ -		H	O	O	C ₂ H ₅	204	β
I-1-c-9	CH ₃	OCF ₃	H	-(CH ₂) ₂ -CHCH ₃ -(CH ₂) ₂ -		H	O	O	C ₂ H ₅	185	β
I-1-c-10	CH ₃	OCF ₃	H	-(CH ₂) ₂ -CHOCH ₃ -(CH ₂) ₂ -		H	O	O	C ₂ H ₅	155	β

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Anmeldenummer: 96 902 951.1-2101
3. Anlage zur Eingabe vom 15. Januar 2001

Fortsetzung Tabelle der Formel I-1-a

Bsp.-Nr.	X	Y	Z	A	B	D	Fp. °C	Isomer
I-1-a-23	CH ₃	CF ₃	CH ₃	-(CH ₂) ₂ -CHCH ₃ -(CH ₂) ₂ -		H	>220	β
I-1-a-24	CH ₃	CF ₃	CH ₃	-(CH ₂) ₂ -CHOCH ₃ -(CH ₂) ₂ -		H	>220	β
I-1-a-25	CF ₃	CH ₃	CH ₃	-(CH ₂) ₂ -CHCH ₃ -(CH ₂) ₂ -		H	170	β
I-1-a-26	CF ₃	CH ₃	CH ₃	-(CH ₂) ₂ -CHOCH ₃ -(CH ₂) ₂ -		H	>220	β
I-1-a-27	NO ₂	CN	H	CH ₃	CH ₃	H	258-260	-
I-1-a-28	NO ₂	CN	H	-(CH ₂) ₂ -CHCH ₃ -(CH ₂) ₂ -		H	>220	β
I-1-a-29	NO ₂	Cl	H	-(CH ₂) ₂ -CHCH ₃ -(CH ₂) ₂ -		H	258	β
I-1-a-30	Cl	H	NO ₂	-(CH ₂) ₂ -CHCH ₃ -(CH ₂) ₂ -		H	232	β
I-1-a-31	NO ₂	CH ₃	CH ₃	-(CH ₂) ₂ -CHOCH ₃ -(CH ₂) ₂ -		H	>232	β
I-1-a-32	Cl	H	NO ₂	-(CH ₂) ₂ -CHOCH ₃ -(CH ₂) ₂ -		H	>250	β

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Fortsetzung Tabelle der Formel I-1-b

Bsp.-Nr.	X	Y	Z	A	B	D	R ^I	Fp. °C	Isomer
I-1-b-20	CH ₃	CF ₃	CH ₃	-(CH ₂) ₂ -CHCH ₃ -(CH ₂) ₂ -		H	i-C ₃ H ₇	204	β
I-1-b-21	CH ₃	CF ₃	CH ₃	-(CH ₂) ₂ -CHOCH ₃ -(CH ₂) ₂ -		H	i-C ₃ H ₇	192-194	β
I-1-b-22	CF ₃	CH ₃	CH ₃	-(CH ₂) ₂ -CHCH ₃ -(CH ₂) ₂ -		H	i-C ₃ H ₇	198	β
I-1-b-23	CF ₃	CH ₃	CH ₃	-(CH ₂) ₂ -CHOCH ₃ -(CH ₂) ₂ -		H	i-C ₃ H ₇	192	β
I-1-b-24	NO ₂	CN	H	CH ₃	CH ₃	H	i-C ₃ H ₇	187-189	-
I-1-b-25	Cl	H	NO ₂	-(CH ₂) ₂ -CHOCH ₃ -(CH ₂) ₂ -		H	i-C ₃ H ₇	232	β

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Fortsetzung Tabelle der Formel I-1-c

Bsp.-Nr.	X	Y	Z	A	B	D	L	M	R ²	Fp. °C	Isomer
I-1-c-11	CH ₃	CF ₃	CH ₃	-(CH ₂) ₂ -CHOCH ₃ -(CH ₂) ₂ -		H	O	O	C ₂ H ₅	199-200	β
I-1-c-12	CF ₃	CH ₃	CH ₃	-(CH ₂) ₂ -CHCH ₃ -(CH ₂) ₂ -		H	O	O	C ₂ H ₅	165	β
I-1-c-13	CF ₃	CH ₃	CH ₃	-(CH ₂) ₂ -CHOCH ₃ -(CH ₂) ₂ -		H	O	O	C ₂ H ₅	210	β
I-1-c-14	NO ₂	CN	H	CH ₃	CH ₃	H	O	O	C ₂ H ₅	148-150	-
I-1-c-15	Cl	H	NO ₂	-(CH ₂) ₂ -CHOCH ₃ -(CH ₂) ₂ -		H	O	O	C ₂ H ₅	238-240	δ